

REMARKS / ARGUMENTS

The action by the Examiner in this application, together with the references cited, has been given careful consideration. Following such consideration, claims 2-13 remain unchanged, claims 15-20 have been added, and claims 1 and 14 have been amended. The specification has been amended to correct minor typographical errors. It is respectfully requested that the Examiner reconsider the claims in their present form, together with the following comments, and allow the application.

As the Examiner well knows, the present invention relates to a chemical delivery device for holding powdered reagents that interact with water to form an anti-microbial fluid for use in an apparatus for cleaning and microbially deactivating items. The device includes a container, a rigid lid, and a plate having a plurality of spaced-apart apertures formed therethrough. The container has a fluid inlet that connects to a source of water and an outlet that is in fluid communication with the items to be microbially deactivated. The fluid inlet is defined by a connection means. In one embodiment, the connection means is a nipple (see paragraph [0031] of the present specification). The container defines a fluid passage from the fluid inlet to the fluid outlet.

A cavity is defined by the rigid lid and the plate. The cavity defines a portion of the fluid passage that extends through the container. The cavity is disposed above the plate which is disposed above isolated lower compartments that hold a chemical reagent in powdered form. The cavity is isolated from the lower compartments by the plate. The plurality of apertures in the plate fluidly connects the cavity to the lower compartments.

As disclosed in paragraphs [0047] and [0048] of the present specification, water under pressure is forced into the container through the connection means. The water is then forced along the fluid passage. In this respect, the fluid inlet, i.e., the nozzle, is sealable with the circulation system thereby maintaining water under pressure within the fluid passage. The structure of the present invention is designed to create a plurality of distinct streams, i.e., "jets," of fluid to impact the reagent located in the upper compartment. In this respect, fluid that flows from the fluid inlet to the upper compartment must pass through the plurality of spaced-apart apertures in the plate. A plurality of separate streams, i.e., jets, of fluid are created by the plate and by the plurality of spaced-apart apertures formed therein. These jets of fluid impact the reagent in the upper compartment and aid in the proper dissolution of the reagent.

In response to the Examiner's rejections, the claims have been amended to define more clearly the patentable invention Applicants believe is disclosed herein. Claim 1 has been amended to recite "a rigid container having connection means defining a fluid inlet, said connection means being sealably connectable to a source of water...." Claim 1 has also been amended to indicate "a cavity defined above said plate, said cavity communicating with said fluid inlet, defining a portion of said continuous fluid passage, and being fluidly connected to said compartment by said plurality of spaced-apart apertures formed through said plate."

Claim 14 has been amended to indicate a "connection means defining a fluid inlet, said connection means being sealably connectable to said circulation system [and] a fluid outlet in communication with said chamber...." Claim 14 has also been amended to indicate that a cavity is defined "above said plate, said cavity communicating with said fluid inlet, defining a portion

of said continuous fluid passage, and being fluidly connected to said compartment by said plurality of said spaced-apart apertures formed through said plate.”

The Examiner rejected claims 1, 6, 10, 11 and 13 under 35 U.S.C. 102 as being anticipated by Fricker et al. (U.S. Patent No. 6,325,968).

The ‘968 patent discloses a cylindrical package C for holding powdered reagents that interact with water to form an anti-microbial fluid. The package C includes a rigid container 50 having a fluid inlet connectable to a source of water and a fluid outlet in fluid communication with items to be microbially deactivated. Package C is disposed in a well 16. A top cover 78 is supported by stiffener 82. In this regard, the fluid inlet disclosed in the ‘968 patent is not sealably connectable to a source of water. Instead, the container of the ‘968 patent is disposed in well 16, and well 16 is filled such that package C is immersed in water.

The ‘968 patent does not teach, suggest, or show “a connection means defining a fluid inlet, said connection means being *sealably* connectable to a source of water” as required by claim 1. The ‘968 patent also does not show a cavity defined above a plate that is fluidly connected to a compartment by a plurality of space-apart apertures formed through the plate as required by claim 1. In this respect, the ‘968 patent does not teach, suggest, or show the benefit of the claimed structure, namely the formation of jets or streams of water entering the chemical compartment to help dissolve the chemistry therein.

The Examiner rejected claims 1, 2, and 6-14 under 35 U.S.C. 103(a) as being unpatentable over Fricker et al. (U.S. Patent No. 6,325,968) in view of Livingston et al. (U.S. Patent No. 5,759,501), claim 3 further in view of Siegel et al. (U.S. Patent No. 5,662,866) and claims 4 and 5 further in view of Davis (U.S. Patent No. 6,158,580).

It is respectfully submitted that none of the cited references, alone or together, teaches, suggests or shows the claims in their present form. The combination of the '968 patent and either of the '501, '866 or '580 patents does not teach, suggest or show the structure set forth in claims 1 or 14. The cited patents do not show a "connection means defining a fluid inlet, said connection means being *sealably* connectable to a source of water...." Further, the cited patents do not show "a cavity defined above a plate."

Referring now to new claim 17, none of the cited references teaches, suggests, or shows a structure having a rigid lid disposed above a plate that has "a plurality of spaced-apart apertures." Further, none of the references shows a cavity defined between said plate and said lid, said cavity being isolated from said compartment by said plate, and said cavity being fluidly connected to said compartment by said plurality of spaced-apart apertures formed through said plate, as required by new claim 17.

To summarize, the present invention provides a chemical delivery device having a cavity defined in a fluid passage above a compartment containing dry reagents. The connection means allows for water to be introduced into the cavity under pressure, and to be forced into the chemistry-holding compartment under pressure in spaced-apart jets or streams. The cavity functions to lower the linear velocity of the pressurized water flowing through the passage. Because the linear velocity of the fluids within the passage is lowered, the fluid is evenly distributed between the apertures through the plate. It is believed that even distribution of fluid passing through the apertures in the plate results in uniform dissolution of the dry reagent and reduced channelization of the dry reagent. None of the cited references teaches, suggests, or

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shows a fluid passage having a cavity defined therein by a rigid lid and plate, wherein the cavity is disposed above the dry reagent.

For the foregoing reasons, it is respectfully submitted that the claims in their present form are distinguishable from the cited references, and favorable action is therefore respectfully requested.

Respectfully submitted,



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I hereby certify that this correspondence (along with any paper referenced as being attached or enclosed) is being deposited on the below date with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to MAIL STOP RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: October 3, 2006



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